

NEWSLINE

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Friday, February 7, 2003

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FROM THE DIRECTOR'S OFFICE

Wayne Shotts

Passion for mission tops LLNL list of values

Director's note: Senior management recently unveiled a set of values for the Laboratory. Each value will be discussed in a Director's Office column. Today, Wayne Shotts, AD for NAI and acting director of the Homeland Security Organization, looks at the first value, passion for mission.

At the Director's Senior Management offsite in December, we attempted to define the values that distinguish this Laboratory. We started out listing the usual suspects like "integrity" and "excellence." Although those qualities are important, they are not unique to Livermore. So we talked about our personal experiences — what it was that brought us to the Lab and has kept us here — and as we talked, we started to identify the values that truly distinguish this institution from others.

Passion for mission was identified as the Laboratory's top value. Now it may seem strange that a bunch of scientists and managers would select passion as the characteristic we value most about the place where we work. Yet if you check Webster's dictionary, passion is defined as "an intense, driving feeling" or "a strong devotion to some activity or concept" — which is exactly what we mean.

We call passion for mission a value, but it's more than that. I believe that passion for mission is the defining characteristic of our Laboratory.

It is passion for mission, a driving commitment to solve important national problems, that prompts a scientist or engineer to propose some radically new idea, to try to do something that others say can't be done — and to succeed.

It is passion for mission that pushes our operations and support staff to go all out in supporting a programmatic activity, to come up with ways of doing business more efficiently or providing services more quickly here at home, or weave their way through tortuous cultural, regulatory and bureaucratic mazes to facilitate Lab activities in Russia and other foreign countries.

Everyone — regardless of job classification, current assignment or length of tenure — helps nurture and perpetuate this

See **DIRECTOR'S OFFICE**, page 8

DOE unveils Lab 2004 budget request

The fiscal year 2004 Department of Energy portion of the President's budget request rolled out by Energy Secretary Spencer Abraham Monday shows strong support for Laboratory national security missions in stockpile stewardship and nonproliferation as well as some areas of science (see accompanying article on DOE budget roll out).

The fiscal year (FY) 2004 President's budget request for the Laboratory totals \$1.172 billion, up slightly from the \$1.167 billion for FY 2003. Over-

all, this budget request shows an increase of \$4.4 million for the Laboratory from the FY 2003 budget request. "It's important to remember that the roll out is just the beginning of the budget process, which culminates with passage of the budget by Congress, hopefully, by the end of September. Actual funding allocations by DOE to the contractor takes place after Congress passes the budget,"

See **BUDGET**, page 7

Memorial ceremony



DON JOHNSTON/NEWSLINE

Amy Feikert, Chelle Clements and Marty Davis at memorial ceremony for astronauts (See page 2 for additional coverage).

Columbia astronauts fondly remembered

By Anne M. Stark

NEWSLINE STAFF WRITERS

They were mothers, brothers, fathers and sisters, but to former astronauts Tammy Jernigan and Jeff Wisoff, they were all very dear friends and members of an extended astronaut family.

And now that family is seven members short as the Columbia Space Shuttle tragedy Saturday took the lives of Rick Husband, Dave Brown, William McCool, Michael Anderson, Kalpana Chawla, Laurel Clark and Ilan Ramon.

"They're not just names in the news," said Wisoff, who now works in the National Ignition Facility Directorate. "They were people with friends and family. Their real legacy is going to be their children. The country has a reason to honor these people and realize they (NASA) had the best people flying the shuttle."

Jernigan and Wisoff (who are married and who flew nine space missions between them during their NASA careers) described the Columbia astronauts as the most cohesive, optimistic space team that they had ever met.

Jernigan, who is now assistant associate director for special projects in the Physics and Advanced Technologies Directorate, flew her last of five missions with Husband in 1999. She said he always

See **ASTRONAUTS**, page 5

Study shows age is a factor in male fertility

Sarah Yang

UC BERKELEY

With each passing year, semen quality in adult men declines, suggesting that age plays a greater role in male fertility rates than previously thought, according to a new study by researchers at Livermore Lab and the UC Berkeley.

The study, published Thursday, in the journal *Human Reproduction*, suggests that even healthy men

may become progressively less fertile as time goes by.

"Prior studies on semen quality typically included men who came to fertility clinics," said Brenda Eskenazi, professor of epidemiology and maternal and child health at UC Berkeley's School of Public Health, and co-author of the study. "This is one of the first studies to focus on men with no known fertility concerns, giving us a better sense of whether age affects semen qual-

See **FERTILITY**, page 8



A view of Lab
optics

– Page 3



Training with
Class

– Insert



LAB COMMUNITY NEWS

Weekly Calendar

Saturday
8

LLNL's American Indian Activity Group and Livermore High School's Native American group, are sponsoring a **free local pow-wow** from 11 a.m. to 10 p.m. at Livermore High School. The event will include Native American dancing, singing, arts and crafts, and traditional foods. Contact: Darlene Yazzie, 3-7846.

Tuesday
11

Today is the deadline to place an order for the Association of Black Laboratory Employees' annual **Valentine's Day Scholarship fundraiser**. For a \$12 donation, you'll receive each of the following: one stuffed animal; one 18-inch mylar balloon with "Happy Valentine's Day"; one See's truffle in a decorative box. Contact Pearlina Williams, holtonwilliams1@llnl.gov, or Lisa Rashidi, rashidi2@llnl.gov to place orders

...
A representative from the **Social Security Administration** will be at the Lab on today, Feb. 11 from 1:30 p.m. - 2:30 p.m. in Bldg. 361, auditorium to discuss benefits available to those covered by Social Security. This one-hour presentation will provide participants with the opportunity to ask questions of experts who are familiar with the complexities surrounding this important benefit. Contact: Benefits Office, 2-9955.

...
A representative from **Fidelity Investments** will be on-site to meet with employees today and Wednesday. Fidelity Investments are available to UC's 403(b) participants in addition to the UC-managed investment funds. To make an appointment, call Fidelity at 1-800-642-7131. When calling, be sure to specify you are an LLNL employee.

Wednesday
12

The Benefits Office is offering a workshop on the fundamental principals of investing titled, **"Basic Investment Planning and Savings"** at 8:30 a.m. to noon in the Training Center. The workshop provides participants with the necessary information to assess the risks and potential rewards associated with a wide range of investment choices. Cost is \$45. Pre-registration is required. You can register by visiting the Benefits Office website at www.llnl.gov/jobs/benefits and click on Seminars/Workshops or call the Benefits Office at 2-9957.

Friday
14

Today is the last day to sign up for the upcoming **"Spring Fling" Stamp Camp** to be held on Saturday, Feb. 22, in Bldg. 317 (old LLESA store site). Sponsored by the LLESA Rubber Stamping Networking Group, this hands-on training session will feature different stamping techniques. Participants make and take home five projects. Cost is \$17 for materials. Family members or other guests are welcome; all participant names must be provided at registration. Make your reservations early with Terry Griffin, 2-6684 or griffin6@llnl.gov.

Veterans honor astronauts



DON JOHNSTON/NEWSLINE

From left to right: Amy Feikert, Chelle Clements, Marty Davis, Guy Donovan, Roy Warner, Jim Hamilton, Chris Trapp, Steve Wofford, Doug Brown and Earl Kelly in the memorial rose garden. In a simple poignant ceremony Tuesday, members of the Laboratory Veterans group planted a "Veteran's Honor" rose bush in memory of the seven astronauts who died aboard the space shuttle Columbia. Marty Davis read a poem he composed for the occasion, "Another Tragedy."

IN MEMORIAM

Michael Ray Caraveo

Services have been held for Protective Forces Officer Michael Ray Caraveo, 47, of Tracy, who died Jan. 29, after a brief battle with cancer.

Caraveo was a security police officer at the Lab for more than 18 years.

He grew up in Livermore and attended Livermore High, graduating in 1974. He has since been living in Tracy raising his four daughters for the past 20 years.

He attended the Good Shepherd Community Church in Tracy where Pastor Dr. Ray Spann just recently baptized him. Numerous nieces, nephews and a host of friends survive him. He will be remembered as a loving father, son, brother, uncle, grandpa, and friend who will be sadly missed by all.

Caraveo is survived by daughters Megan (and Tim) Liggett of Tampa, Fla., Kimberly Caraveo, Courtney Caraveo and Shannon Caraveo, all of

Tracy; granddaughter Amaranda Liggett of Tampa, Fla.; father, Raymond Caraveo; and siblings, Art and Donna Caraveo of Livermore and David Caraveo of Stockton.

In lieu of flowers a Caraveo Memorial Fund has been established at Uncle Credit Union, 2100 Las Positas Ct. Livermore, Calif. 94550.

CORRECTION

The Clementine story in the Jan. 31, 2003, edition of *Newsline*, misidentified Lab employee Mike Richardson. Since the Clementine project, Richardson works at the National Ignition Facility and belongs to the Laser Science Engineering Division of the Engineering Directorate.

In the same story Rob Hills' title was misidentified. Hills, matrixed from the Engineering Directorate, is an associate division leader in the Non-proliferation, Arms Control and International Security Directorate.

Newsline

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Special lab event to mark National Engineering Day

The Laboratory will celebrate National Engineers Day from 9 a.m. to noon Friday, Feb. 21 with special events for school age children in the Bldg. 123 auditorium and West Café.

Greg Brown from The Tech Museum of Innovation will deliver this year's keynote address, "You're Already An Engineer." Children between the ages of 10 and 14 will also have the opportunity to participate in hands-on demos such as LEGO Mindstorms, Sunspots, What's in a computer, among other activities.

Classes of students as well as individual parents with children are welcome to attend. Because of limited space pre-registration is required.

To register or for more information, please contact Elizabeth Wheeler, wheeler16@llnl.gov, 423-6245 or Scott Winters, winters4@llnl.gov, 422-6767.



AROUND THE LAB

Photonics conference highlights Lab optical engineering

By Anne M. Stark

NEWSLINE STAFF WRITER

San Jose, Calif. — The Laboratory's heritage in optical engineering was highlighted last week during the International Optical Engineering Society's Photonics West 2003 Conference at the San Jose Convention Center.

Sponsored by the Engineering Directorate, the Lab's one-day session, titled "Optical Engineering at the Lawrence Livermore National Lab," gave an overview of the contributions of optical engineering and photonics to the development of technology at the Lab.

Though several Lab scientists participated in other sessions at the conference, the Lab-specific session featured presentations by more than a dozen LLNL researchers discussing topics ranging from solid state lasers to extreme ultraviolet lithography to optics and photonics in medical technology, to adaptive optics applications and remote imaging.

Ted Saito of the Lab's Engineering Directorate co-chaired the Lab session with Monya Lane, Engineering operations manager. Saito opened the session by telling participants that LLNL is not only a national defense laboratory but also a "scientific resource and partner with industry."

All presentations focused on the role photonics and optical engineering play at the Laboratory. Jack Campbell, NIF associate project manager for optics, discussed how lasers and optics are critical to the National Ignition Facility. He reviewed the challenges of building the world's largest optical instrument and highlighted the optics industry's

contributions.

Campbell said that when finished, the \$2.3 billion facility will contain \$250 million worth of optics that require the optics industry to increase its production capability by up to five times.

During another presentation, Steve Lane of the Lab's M Division (formerly Medical Technology Program) of the Physics and Advanced Technologies Directorate, discussed the role medicine plays at the Lab.

“People are often surprised that medical research is being done at a nuclear weapons lab,” he said. “But most medical devices are based on physical science.”

He discussed how the Lab's medical technology scientists work with physicians to define the need for new medical devices. But the ultimate goal is that once a prototype is developed, the technology is transferred through licensing or a Cooperative Research and Development Agreement (CRADA) to the private sector.

Lane talked about several different medical



Steve Lane

devices that are being developed at the Lab from a fiber optic thread that can be used in stroke victims to emulsify blood clots in the brain to a glucose sensor for diabetics that uses light scattering techniques to determine the amount of glucose in a person's blood stream.

In a later presentation, Ray Mariella, director of the Lab's Center for Microtechnology, discussed the role photonics plays in creating fieldable detector systems.

“We don’t just develop new detector technologies,” he said. “We develop the whole system and test the product in the field.” He presented a case study of HANNA, a handheld device for detection of pathogens in the field, which was the culmination of seven years of innovation.

Other Lab presentations
focused on:

- The role of adaptive optics in astronomy and vision science, and speckle imaging over long horizontal or slant paths.

- Analysis of remotely sensed image data as it relates to detecting human settlements in satellite images, image segmentation and algorithm options, and regression techniques for material identification in hyperspectral data.

New procurement Web portal launched

Procurement and Materiel is now debuting a new systems Procurement and Materiel (P&M) Portal that provides systems users single intranet access to all of Procurement's Web based applications — the Total OnLine Procurement System (TOPS), the Electronic Ordering System (EOS) and ShipIt.

The new portal provides a user inbox for viewing and accessing system approvals, a portlet for tracking packages that come into LLNL receiving that links to UPS tracking, a one stop location to the most used procurement reports, portlets to view order detail and status, Procurement news and links to the Procurement Home Page and other resources. Like the “My LLNL” portal, users customize some of the portlets.

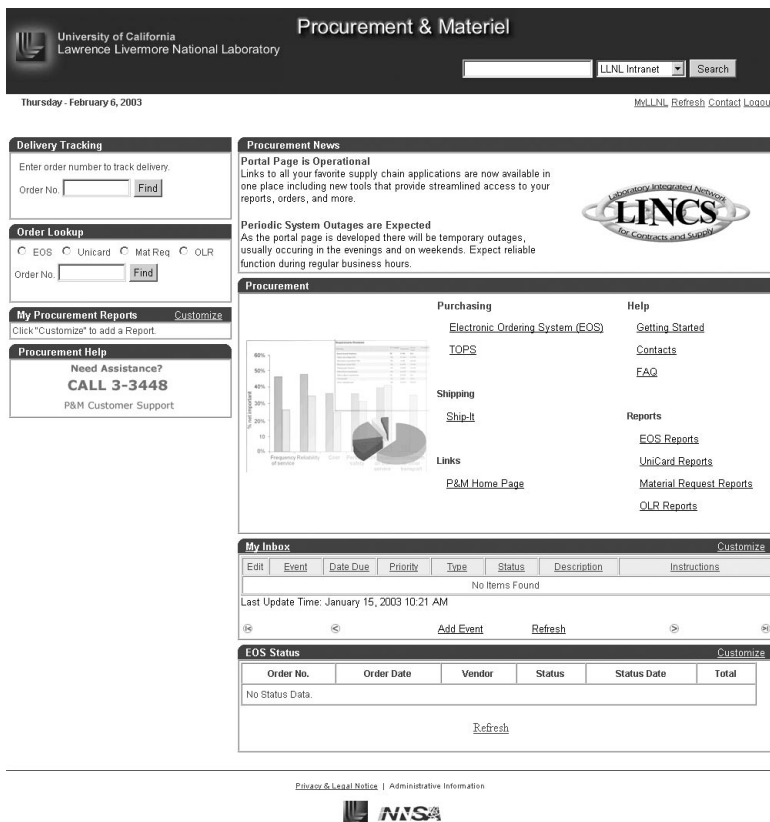
This portal is the first step in P&Ms current procurement systems re-engineering project. This project is focused on rebuilding some applications like PARIS, and integrating the various procurement systems into one institutionally supported supply chain, accessible from the Procurement & Materiel Portal.

The new system will be known as LINCS, or the Laboratory Integrated Network for Contracts and Supply. LINCS will make it easier for all end users at the Laborato-

ry to order the items or services they need as well as to get information about those orders.

The new Procurement & Materiel Portal can be accessed from “My LLNL” by logging on, clicking on the “Services” tab and clicking on the “Procurement & Materiel Portal” link in the Services Portlet. Once there, users can “Bookmark” or make it a “Favorite.”

For more information, contact Procurement Customer Service at 3-3448 or email pcs@llnl.gov.



Federal occupational illness representatives visit Bay Area

Representatives of the U.S. departments of Energy and Labor will be in the Bay Area March 3-6 to assist current and former nuclear weapons workers and their survivors who have questions or need help filing a claim under the Energy Employees Occupational Illness Program Compensation Act.

The act became effective July 31, 2001.

The Labor Department administers the program that provides a lump sum of up to \$150,000 and payment of future medical expenses to current and former Energy Department employees and contractor employees who suffer from radiogenic cancers, beryllium disease and chronic silicosis. Qualified survivors of covered employees, including adult children, also are eligible for benefits.

The Energy Department program helps contractor employees apply for state worker's compensation if it is determined by an independent physician's panel that the worker sustained an illness caused by exposure to a toxic substance at an Energy Department facility.

Energy Department designated facilities include Lawrence Livermore and Lawrence Berkeley national laboratories, Sandia/California, Hexcel Products in Berkeley; Hafer Tool in Oakland; Pleasanton Tool and Manufacturing; Electrofusion and Poltech Precision in Fremont; and EDM Exotics in Hayward.

Workers who need help filling out claim forms can schedule appointments by calling toll-free 1-866-697-0841 or dropping in during hours listed below.

- 8:30 a.m. to 6 p.m. March 3-6 at Four Points Hotel by Sheraton, 5115 Hopyard Rd., Pleasanton.
- 8:30 a.m. to 6 p.m. March 5 and 6 at Woodfin Suite Hotel, 5800 Shellmound St., Emeryville.

For information call 510-637-1818.



NEWS YOU CAN USE

Livermore Computing shuts down temporarily

Livermore Computing shut down power in four buildings starting earlier today for routine maintenance and systems review affecting some services. Power will be fully restored and normal services will resume by noon Monday.

Every three years, Livermore Computing (LC) shuts down all power in Buildings 113, 115, 116, and 117, where most of the LC computers, network equipment, and other equipment are located. During this power outage, about 100 people will thoroughly check all electrical systems for safety and reliability and replace some equipment. Services affected:

- LADS, the classified LLNL document accounting system
- All LC computers on the open and closed network, including CASC home directories and the lc.llnl.gov Web server (open and closed)
- OCF and SCF network and all equip-

ment attached to it, plus DisCom network (classified fast network connection to New Mexico)

- DNS (Domain name service), NTS, SSH, and FTP will be down to LLNL on Securenets, affecting some other local closed networks both on- and off-site.

Open LabNet services including access (including off-site access), email servers and network services, will not be affected by this work. The Open LabNet equipment located in the area of the power outage will remain functional using portable generators.

For the most up-to-date information, please see <https://lc.llnl.gov/computing/news/IBM-news/LC.down> (requires an LC account and login to view this Web page).

The LC Hotline will close at noon Friday, Feb. 7. LC Operations will be available at 2-4531.



Employees may now update personal information online

Lab employees may update their home address and emergency contact information via Human Resources' Web page. The Web page may be accessed from the HR site at http://www-r.llnl.gov/human_resources/hrsvcs/index.html under HR Application Page, Employee Self Service or directly at https://www-ais.llnl.gov/llnl_plsql_ps_auth/ps_web_hr_pg2.ps_show_page_pr5

Access requires an official Lab Web ID and password (just like that used for time entry in LITE and other AIS applications). Personal information must be current to ensure timely receipt of official UC or Lab communications such as benefits statements, retirement plan balances, W-2 forms, Etc.

Under the Employee Self Service menu, employees may choose View Your Personnel Data, Update Your Home Address or Update Your Emergency Contacts. If any of the information under Personnel Data is incorrect, contact the Employment Information Processing Unit at 2-9534 for assistance. If you do not have access to the Internet, please contact your department for assistance. For problems or questions concerning the Website, contact Donna Anklam at 2-5296.

Technical Meeting Calendar

Friday
7

CHEMISTRY & MATERIALS SCIENCE/ENERGETIC MATERIALS CENTER

"Evolution of Reactive Flow Models for Shock Initiation and Detonation of Solid Explosives," by Craig Tarver. 10:30 a.m., Bldg. 191, LX Room. Contact: Tri Tran, 2-0915, or Sue Stacy, 4-2607.

CHEMISTRY & MATERIALS SCIENCE/MATERIALS SCIENCE & TECHNOLOGY

"Processing of Interstellar Dust," by A.G.G.M. Tielens, Kapteyn Astronomical Institute, Groningen, The Netherlands & Astronomy Department, UC Berkeley. 3:30 p.m., Bldg. 235, Gold Room. Coffee and cookies will be served at 3:20 p.m. Contact: Tom Felter, 2-0600, or Rebecca Browning, 2-5500.

PHYSICS & ADVANCED TECHNOLOGIES/V-DIVISION SEMINAR

"Ultra-Short Pulse Laser Experiments on Gold Targets: Boiling Gold," by Dick More, NIFS. 10 a.m., Bldg. 319, room 205. Contact: Stefanie Landes, 2-3201.

Thursday
13

CHEMISTRY & MATERIALS SCIENCE/ANALYTICAL & NUCLEAR CHEMISTRY

"Predicting the Impacts of the Cerro Grande Fire on Floods, Hillslope Erosion, and Sediment and Contaminant Transport," by Cathy J. Wilson, Los Alamos National Laboratory. 11 a.m., Bldg. 151, Stevenson Room (1109). Contact: Rosa Yamamoto, 2-0454.

CHEMISTRY & MATERIALS SCIENCE

"Water Technology for the 21st Century," by Dana Christensen, principal deputy associate director, Energy and Environment Directorate. Noon, Bldg. 151, Stevenson Room (room 1209), property protection area. Contact: Tony Esposito, 4-3497, or Linda Jones, 3-8839.

CHEMISTRY & MATERIALS SCIENCE/MATERIALS SCIENCE & TECHNOLOGY

"Pu Electronic Structure," by Andrey Kutepov, Russian Federation Nuclear Centre-VNIITF, Snezhinsk, Russia. 3:30 p.m., Bldg. 235, Gold Room. Coffee and cookies will be served at 3:20 p.m. Contact: Jim Tobin, 2-7247, or Rebecca Browning, 2-5500.

Friday
14

CHEMISTRY & MATERIALS SCIENCE/MATERIALS SCIENCE & TECHNOLOGY

"Molecular Dynamics Simulations," by Vladimir Dremov, Russian Federation Nuclear Centre-VNIITF, Snezhinsk, Russia. 3:30 p.m., Bldg. 235, Gold Room. Coffee and cookies served at 3:20 p.m. Contact: Tom Felter, 2-8012, Jim Tobin, 2-7247, or Rebecca Browning, 2-5500.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"Efficient Discovery of Previously Unknown Patterns and Relationships in Massive Time Series Databases," by Eamonn Keogh, UC Riverside. 10 a.m., Bldg. 451, room 1025 (property protection area). Contact: Ghaleb Abdulla, 3-5947, or Leslie Bills, 3-8927.

Tuesday
18

ENGINEERING DIRECTORATE/CENTER FOR NONDESTRUCTIVE CHARACTERIZATION

"Ultrasonic Guided Waves: Inner Space Explorers," by Mike Quarry. 1:30 p.m., Bldg. 235, Gold Room. Contact: Ann Tyler, tyler8@llnl.gov.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"DEFACTO: Combining Parallelizing Compiler Technology with Hardware Behavioral Synthesis," Pedro Diniz, University of Southern California. 2 p.m., Bldg. 451, room 1025 (property protection area). Contacts: Jeffrey Vetter, 4-6284, or Leslie Bills, 3-8927. For more information see URL (<http://www.llnl.gov/casc/calendar.shtml>).

February
20

LIVERMORE COMPUTING WORKSHOP

"VGV, A Performance Analysis Tool for OpenMP+MPI." 9 a.m.-4 p.m., Computation Training Center, Trailer 1889. Register by Feb. 14. Hands-on exercises on how to use VGV will be provided. Contact: LC Hotline, 2-4531 or lc-hotline@llnl.gov.

February
21

H DIVISION SEMINAR

"Epitaxial Oxides on Si: Theory of the Atomic and Electronic Structure of the Si/SrTiO₃ Interface," by Alex Demkov, Materials Theory and Simulations, Physics Science Research Laboratory, Motorola, Inc. 10 a.m., Bldg. 319, room 205 (property protection area). Contact: Giulia Galli, 3-4223, or Darlene Klein, 4-4844.

February
25

PHYSICS AND ADVANCED TECHNOLOGIES/IGPP

"The Production of the Ne, Na, Mg and Al Isotopes in Asymptotic Giant Branch Stars," by Amanda Karakas, Centre for Stellar and Planetary Astrophysics, Monash University, Australia. Noon, Bldg. 219, room 163. Refreshments will be served. Technical contact: David Dearborn, 2-7219. Administrative contact: Sandra Maldonado, 3-0621.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Send your input to tmc-submit@llnl.gov. For information on electronic mail or the newsgroup llnl.meeting, contact the registrar at registrar@llnl.gov.

NEWS OF NOTE



EUVL project earns federal lab consortium award

By Anne M. Stark
NEWSLINE STAFF WRITER

The Federal Laboratory Consortium for Technology Transfer has granted the Extreme Ultraviolet Lithography (EUVL) project an Excellency in Technology Transfer award for transferring to industry technology that will lead to microprocessors that are tens of times faster than today’s most powerful chips and create memory chips with similar increases in storage capacity.

The EUVL team is made up of scientists and researchers from LLNL, Lawrence Berkeley and Sandia national laboratories collaborating as the Virtual National Laboratory. The team has successfully transferred the EUVL technology under a multi-year CRADA (Cooperative Research and Development Agreement) to the Extreme Ultraviolet Limited Liability Company (EUV LLC), a consortium headed by Intel Corporation that includes chipmakers Advanced Micro Devices, IBM, Infineon, Micron Technologies and Motorola.

Current lithography technology — which uses light, focused by lenses, to imprint features etched on a silicon chip — has advanced during the past 25 years to essentially double the number of features that can be packed onto each chip every two years. However, by 2007, the steady

reduction in feature sizes possible with visible and ultraviolet-light lithography are expected to reach a physical limit, halting advances in the speed and power of microprocessors.

EUVL has been targeted by industry as the next-generation lithography approach to be introduced in 2007 for high-volume manufacturing. It uses EUV light with a wavelength 10 times shorter than the current wavelengths. Since the shorter wavelength is absorbed by lenses, the EUVL system must use a reflective optical system (coated mirrors) instead of transmitting lenses for the operating wavelength of 134 Angstroms. Industry watchers say EUV lithography could be used for the next decade in contrast to current lithographic techniques that are typically outdated within a few years.

The first full-scale prototype EUVL machine, located at Sandia National Laboratories in Livermore, was completed in 2001 and will make possible microprocessors that are ten times faster with 10 times as many active transistors and memory chips that can store 40 times more information.

“This recognition marks another milestone in the evolution of EUVL technology,” said Don Sweeney, Livermore’s EUVL program manager and director of the EUV Virtual National Laboratory. “It truly is an honor to be recognized for the successful transfer of fundamental science

developed at the national laboratory level to the private sector.”

The Lab’s EUVL team is headed by Sweeney of the Physics and Advanced Technologies Directorate. Current team members include Jennifer Alameda, Sasa Bajt, Anton Barty, Sherry Baker, Butch Bradsher, Henry Chapman, Carl Chung, Al Edge, Jim Folta, Layton Hale, Stefan Hau-Riege, Michael Johnson, Patrick Kearney, Cindy Larson, Rick Levesque, Paul Mirkarimi, Nhan Nguyen, Gary Otani, Don Phillion, Jeff Robinson, Mark Schmidt, Frank Snell, Gary Sommargren, Regina Soufli, Victor Sperry, Eberhard Spiller, John S. Taylor and Chris Walton.

The FLC award is only given to organizations that have successfully transferred a technology to a commercial company. A panel of technology transfer experts from industry, state and local government, academia and the federal laboratory system evaluated the nominations.

The Federal Laboratory Consortium for Technology Transfer is a nationwide network of more than 700 federal laboratories that provides a forum to develop strategies and opportunities for linking laboratory technologies with the commercial marketplace. The FLC was organized in 1974 and formally chartered by the Federal Technology Transfer Act of 1986 to promote and strengthen technology transfer nationwide.

Science on Saturday to shed light on new medical technologies

The Laboratory’s Science on Saturday lecture series for middle and high school students kicks off Saturday with “Harnessing Light for Medicine: Creating New Biophotonics Tools for Doctors.” The lecture begins at 9:30 a.m. in the Laboratory’s Bldg. 123 auditorium.

Lab physicist Duncan Maitland, along with science teacher Susan Daly of the Athenian School in Danville, will focus on medical applications of light. Students will learn what light is, where it is currently used in medicine and how it might be in the future. Maitland will also explain how different characteris-

tics of light can cause everything from bioluminescence (like lightning bugs) to heating of tissues to cure diseases to lasers that create micro-explosions in blood vessels.

Science on Saturday is a five-week series of free 60-minute talks geared toward middle school and high school students. It is co-sponsored by Livermore Laboratory and the Livermore chapter of Sigma Xi, the Scientific Research Society.

The free lectures, which cover a wide range of topics from forensic science to massive galaxies, will be offered every Saturday through March 8, from

9:30-11:15 a.m. All of the talks will be in the Bldg. 123 auditorium and are open to students, their parents or guardians, and teachers.

Registration is at the door and seating is available on a first-come, first-served basis, with priority given to students. Please note that all SOS visitors will need to enter the Laboratory through the southwest entrance on East Avenue.

For more information, including directions, about Science on Saturday, check the Website (<http://education.llnl.gov/sos>) or email the Lab’s Science and Technology Education Program at education@llnl.gov

SPRING 2003 • A QUARTERLY SAFETY AND WELLNESS MAGAZINE

Family Safety & Health

Safety Towns
Help Kids Learn

Earth Day Checklist
Keep These Tips In Mind on April 22

Fire Safety
Do You Know How to Use a Fire Extinguisher?

First Aid
Know the Basics to Protect Yourself

Spring Fitness
Kick Off the Season With 2003's

Driving Safety
All-Terrain Vehicle Safety

Family Health
Steps to Personal Health

Healthy Eating
How Healthy Do You Eat Away From Home?

Product Safety
New Leader Promises Vigilance Over Unsafe Products

Employees will soon be receiving the latest edition of Family Safety & Health, the quarterly magazine offering information about safety at home as well as in the workplace.

ASTRONAUTS
Continued from page 1

had a smile on his face and could always be counted on, especially when she went out on her space walk.

“It was nice to know that before you went out the door to the vacuum of space that you had someone as conscientious as Rick making sure all the systems of your space suit were working properly,” she said. “There was a lot on the line and we really trusted Rick.”

Wisoff and Jernigan had nothing but compliments for the crew. Wisoff worked with Brown, Chawla and Clark at the same branch of NASA.

“Dave Brown was one of the nicest guys you could ever meet. He was just always willing to take his personal time to help another person out,” he said. “Laurel was not only a talented doctor but also a very devoted mother and KC was very talented and very outgoing.”

Jernigan and Wisoff were home Saturday morning when they heard the news that the Columbia crew had lost contact with mission control in Houston.

“I think we were praying that we would hear something from the crew, that there would be survivors,” Jernigan said. “We knew that wasn’t very likely, but it’s difficult not to hope in a situation like that.

“I can hardly believe they are gone. We lost some very close friends.”

Wisoff said he and Jernigan typically watch the space shuttle launches in anticipation because that is where the most risk is typically involved and their friends are on the vehicles.

The launch is like “crawling into the belly of a dragon,” Wisoff said. “We know the risk is always there but you expect the risk level to be much higher on the launch.”

Jernigan said she didn’t concentrate on the risks of flying into outer space. “You don’t focus on the risk,” she said. “It’s not something weighing on you. You’re really focused on the technical aspects of the flight.”

But watching television Saturday morning and knowing the families of the crew was a most sorrowful experience for the couple.

“For the families, you expend your emotion about the risks of flight on the launch. Once you get through that, you’re a bit relieved,” Wisoff said. “But this is like a kick in the stomach. We were just shell shocked. To lose your family 15 minutes before landing is such an incredible tragedy.”

Jernigan said though she lost a great friend and fellow Christian in Husband, she will never forget the fond memories she has of sharing in his first mission and first view of Earth from space.

“I remember talking to him about what a beautiful planet God created and that you could indeed see the majesty of His work,” she said.



CLASSIFIED ADS

See complete classified ad listings at
<https://www-ais.llnl.gov/newsline/ads/>

AUTOMOBILES

1997 El Dorado, low miles, full warranty, leather interior, CD, all power, excellent condition, alarm, Bose sound system. 18,500.00 OBO 510-582-2938

1987 - Toyota Celica- 2DR.,AC, 5speed, AM/FM, Burgundy color, 106K, 16Valve, good condition, \$2100 or OBO 925-803-1802

1996 - Honda Civic 2dr Silver EX Coupe. 91K miles 100K warranty. 5 speed, sunroof, AC, remote locks, alarm, cruise control. Excellent condition! \$6,000 925-243-0691

1998 - Honda Civic EX Coupe, green, 69K mi, manual trans, well cared for, great commuter, \$7,500 209-839-9757

1996 Nissan Maxima SE, fully loaded black w/gray interior, excellent cond. \$6,000 or BO 925-413-1046

1992 - Civic Hatchbach,151K,nice car,call for details, \$3200 or b/o 925-447-4224

1998 - Honda Prelude. Green/Beige, 44k miles, 5-speed, ABS, CD, premium wheels, drives great. \$14,000 / BO. 415-827-2145

1998 - Ford Mustang, Silver, Auto-trans, Tinted power windows & doors, CD stereo, spoiler, great condition, very clean, \$6,800 obo. 925-964-0534

1996 - Lincoln Towncar Limo, 5 ft stretch, loaded, perfect, 107K mi, midnight blue w/black leather roof, dark blue leather interior. Must sell. \$10,000/BO 925-829-6203

1996 - Mercury Tracer, 4 door, manual trans., green, power steering, Runs well. Getting rid of second car. Located in Berkeley. 510-845-5890

1993 - Mazda MX-6 Sports Coupe, 5-speed, sunroof, good condition. \$3500. 925-485-1988

1995 - Mercury Villager, ex. cond., with new tires. White w/blue interior, very clean, just one gentle driver. 90K miles; asking \$5K (KBB\$6.6K) 925-846-9515

1993 - Jeep Wrangler, blue. 4cyl. Soft Top. bike and camping rack. 91k miles. Runs great. Glass windows. lockboxes. \$8k or best offer. 925-449-1775

1994 - Chrysler Concord - Auto, V6, 3.5L engine, CD, Leather interior, new tires, plus alarm. 76K miles, clean one owner \$4900. 925-443-1034

1987 - Handicapped Equipped Ford E150,v8, 302cu, CD, Auto. Golden Boy Lift for scooter/wheelchair. New tires, good cond. \$3500 OBO. 925-443-1034

1993 - Honda Accord LX,4-dr,A/T, burgandy exterior. 103K miles, one owner, newer tires, good condition. \$5200 925-600-8079

1990 - Honda Prelude Si. Ex. cond. 99K mi. PS, PW, PDL, A/C. This car has four wheel steering. \$ 5500. 209-823-1901

1979 - Convertible VW Bug - Orig. blue w/white rag top and white interior. New engine, muffler, brakes, rims, exhaust system. A real cutie! 209-835-5066

1995 - Plymouth Voyager SE, 114K miles, 3.3/V-6, Quad seating, ABS, A/C, power everything, roof rack, etc. Excellent condition inside, VG outside. \$4,000. 925-830-1868

1998 - Chevy Blazer. Fully loaded. Excellent condition. 4WD. 75K miles. \$10,800 510-881-8536

2002 - Honda Accord EX, 6 cyl. pr win,doors, and brakes. Sunroof, Leather int. Stock stereo w/ 6 disc CD player, AC. Low mileage. \$ 22000. Or Best Offer. 209-518-3007

1987 - Oldsmobile Cutlass Sierra, 2.8 liter, V6, Strong Eng., new tires, minor leak in PS. Fair body cond. \$600 OBO 510-793-6215

1993 - Ford Taurus SHO, sunroof, leather, fully loaded, runs great, power everything, white ext/grey int, tinted windows, CD stereo, \$6,000 OBO, 209-854-2642

1999 - Dodge Durango 4x4; CA concept package; fully loaded; maroon with

leather interior; snow tires; 60K miles; asking \$15,000. 925-679-2680

1997 - Honda Civic LX, 116k freeway mi, auto, cd, a/c, cruise, v. reliable -- great for the commute must sell moving o/s \$6000 510-649-8415

AUTOMOBILE ACCESSORIES

Lexus stainless steel coffee commute mug. Brand new. Paid \$20+. \$10. 925-648-0671

BICYCLES

Mens mtn bike, speacialized hard rock, shimano shifter, good cond. \$75 925-443-2856

bike trainer - just attach you bike to this Mini-trainer to ride indoors. Adjustable tension for resistance. Cost \$125 new, first \$25 takes it. 925-455-4528

Two 1995 Trek 7000 mountain bikes (his & hers). Aluminum frame and fork, shimano XT components. Paid \$600 each. Asking \$600 for both. 925-456-3462

Womens Bikes, Fair Condition, good for use here on site \$25.00 Ea. OBO 925-443-4895

BOATS

2001 MasterCraft X9. Wakeboard/Ski Boat. 108hrs; Loaded and in Perfect Condition! \$35,999 925-997-8489

28 ft. Bayliner, flying bridge, new twin 305 Chevys needs assembly, volvo outdrives rebuilt, triple axel trailer, needs TLC, Best Offer. 925-934-0383

WANTED: 15hp outboard motor in good running condition 510-728-1185

1986 Invader, 16 FT Runabout, 3.0 Liter, 4 Cyl., I/O, Open Bow, New Totally Rebuilt Lower Unit. Runs Great! Great on Gas! \$4995 or BO. 209-836-3062

CAMERAS

Olympus E-10 Digital SLR, 4 MP, macro converter, xtra battery pack, wireless and cable remotes, cir pol & UV filters, 128 MB CF, \$800. 510-226-7440

Cannon E07 video camera 8mm FREE needs minor repair (tape insertion) new 1996 925-634-0423

ELECTRONIC EQUIPMENT

eMachines 366mhz computer w/17 in. monitor, 192mb memory, 20gb hd. Win 98 installed. Great Condition. Just upgrading. \$375 or b/o. 209-983-8886

PS2 Game-Lord of the Rings Two Towers, got two for Christmas. \$40 OBO 925-292-0348

Magellan GPS companion springboard module with software for Visor. Selling it b/c I lost my PDA. Price \$156.78, will sell for \$70 OBO. 925-924-1359

15 inch color computer monitor, speakers, keyboard, mouse. Near new condition. \$35. 925-245-0166

Diablo DAISY WHEEL PRINTER & font wheels. Perfect condition. Manuals for parts, schematics, and use. Leave email address for pics and spec. \$85BO. 510-490-2344

GIVEAWAY

FREE! Sony TV + remote (from 80s), good picture, but other quirks 925-371-8678

HOUSEHOLD

Gas Lawn Mower 21-inch \$75, 4 CuF Mini-Refrigerator \$45, Large Greenlee Lockable Metal Box \$125 925-362-8598

Entertainment Center,Solid oak and in perfect condition 5fx6fx \$100.00 925-371-5371

Craco 6 position adjustable highchair. \$50 925-606-1791

PIANO - Wurlitzer Spinet, Excellent Condition, \$1000.00 or best offer 209-952-5048

Couch and loveseat; navy blue, very good shape, \$200 for both 925-443-1714

Spinet piano by Winter w/bench. Excellent cond. \$600. Barcalounger brown recliner chair. \$75. 925-443-1034

Oak bed set. Cal-King tube floatation bed/frame with full length mirrored head-board and adjoining cabinet/shelve pedestals on both sides.\$500.00 925-243-1777

Girls bedroom set, excellent condition, white French Provincial style. Bed (optional canopy), mattress & springs, desk, chest of drawers. \$225 OBO. 925-606-6071

Maytag Washer and Dryer, old but work well. Moving and they will not fit. 925-454-9431

Light Grey Office Desk in perfect condition. Matching organizer that sits on top goes with it.\$125 OBO 209-823-0234

Washer/dryer, Kenmore, large capacity, 12 yrs old, good working condition. \$90 for pair. You pick-up. 925-830-8640

Garage Sale. Saturday, Feb. 15. 8:00. 1141 Madison, Ave. Livermore. Sewing machine, trundle bed, table, desk, dog house, golf clubs. 925-455-5595

Large executive desk with return. Dark oak. Great condition. \$300/bo. Can bring polaroid. 209-403-4942

Dining table and 4 chairs, beautiful solid oak, 42x42, expands to 42x60, excellent condition, \$400, 925-455-0836

Queen size Futon. Excellent condition, seldom used. \$100.00 925-373-1964

Step 2 Childrens Art Desk w/ chair, \$50. Kiddi-o Trike, sturdy, \$20. Fold-up futon chair, navy w/ baseball pattern, \$15. All in great condition. 925-294-9022

LOST & FOUND

Lost-Nike Wrap around sunglasses during 12-23 thru 12-27 between parking lot D-2 and Bldg 315. Call 2-0556 925-447-8890

MISCELLANEOUS

Rocking Baby Cradle,(Jenny Lind) 11 pad with waterproof cover, rocks or locks, includes bumper and mattress sheets. Like new \$45. 209-599-0922

Infant carseat and Stroller Combo with base. \$50 925-606-1791

Mens gold watch, pd \$250, sell for \$100/obo, entire Planet of the Apes series on DVD to include newest release \$50. 209-815-4807

FOOTBALL SEASON is over. Cleaning out Garage. Garage Sale. 4046 Guilford Ave., Liv. 8am - 1pm 2/8/03 925-454-8486

Longaberger Products, new Easter Basket, or new and retired baskets. 925-449-6048

TeleVue 85 APO Refractor Telescope. Soft case, 2inch Everbrite diagonal, TelePod Mount w/Eye piece caddys, 20mm TV plossl. Perfect condition 2000.00 209-825-0453

TV -13 inch sharp. 1 year old only used approx. 5 times. execl. cond. New \$85 sell for \$40 925-776-5612

Old fashioned style bankers roll up desk. All wood, dark oak finish, full size. \$500.00. 925-243-1777

Moving sale, Saturday February 8th, 9AM-4PM, 5463 Kathy Way,Livermore 925-454-9431

Firewood. Mostly oak, dried and split, about 1/4 cord. You haul. \$25. 925-830-8640

Livermore - Springtown area. House for sale by owner. xtra large lot, ~ 1594 sqft. 3bdrm, 2bth, liv, fam, dining rm, RV access. 925-455-8108

Menís navy sportcoat, size 38, excellent condition. \$25. 925-648-0671

Fireplace Insert: Heavy steel, black with brass door and trim. \$200 925-443-9421

Little Tykes high-back Toddler swing, \$10. FP Magic Sounds Castle, \$15. Red metal wagon, \$5. 925-294-9022

MOTORCYCLES

2002 - NEW Trail 70, HONDA design made by JinCheng Corp. Rear Grab bar,CDI ign.,Street legal Great for kids. \$1850.00 OBO 3-4066 209-835-8976

1986 - Honda 650 4 cylinder for sale \$500.00 runs well. 209-824-7752

1981 - Yamaha XS650 Special, 15k miles, runs and looks good, black, \$975. 209-295-7007

1992 - CR500, new topend, pro tapers, FMF pipe, excellent condition. \$2,200. 209-834-1988

MUSIC INSTRUMENTS

Bruenn upright piano, hand carved design with velvet covered stool. \$600 OBO to loving home. 925-997-4047

Baby Taylor Acoustic Guitar, with Taylor hard shell case. Mint condition. 250.00 209-825-0453

Baldwin aerosonic walnut piano good condition \$950.00 925-443-5802

Violin, 1/4 size Suzuki, with bow and case, \$225, 925-455-0836

PETS & SUPPLIES

Dog pen. 7x7x4, paid \$160. asking \$100, you p/u. Chain link, fittings, gate, disassembled and ready to go. this is a deal. call Scot. 925-314-9478

Birds - Lovebirds, dif. colors. \$30 ea or \$50/pr. Parakeets dif. colors \$20 ea 925-776-5612

Horse bedding: kinl-dried pine shavings. 12 cu. ft. bags \$5.50 each. 925-443-1547

Labrador Retriever Puppies: Two months old, Black or Yellow. All puppy shots, registered with papers. 925-447-9242

Bishop Ranch Veterinary Center \$25 gift certificate for any vet services. \$15. 925-648-0671

Lost Cockatiel. Named Pineapple. Lost in the north Livermore area close to the Eagles Hall. \$50 reward. 925-606-1086

RECREATION EQUIPMENT

GOLF CLUBS Callaway X-14 Pro-Series, 2 thru PW,SW,AW,LW (12 clubs) \$700. 209-833-1201

Self-propelled treadmill. Keep that New Years resolution going. \$50. 925-485-1988

Yakima Ski Rack 2 pairs w/locks. \$75/offer 925-837-8860

US Kids golf clubs for 6-9 year olds. Blue shafts, \$40. Gary Fisher Shortcut model bicycle for kids. 20 inch frame, \$45. 925-924-0233

Large Jacuzzi, decent shape, older model, u-pick up-500\$ 209-527-4990

1976 Winnebago Brave, Dodge 318, 21 FT, Class A, Generator, Headers, Tow Pkg., Sleeps 6, Dual Gas Tanks, Low miles, Runs Great! \$5995 or BO. 209-836-3062

Deluxe one person trampoline. \$40.00 or best offer. 925-449-1128

RIDESHARING

Express your commute, call 2-RIDE for more information or visit <http://www-r.llnl.gov/tsmp> their website.

Lafayette - LaMoRinda Vanpool (also Walnut Creek stop at Rudgear Rd), reclining seats, reading lights, 7:45-4:45, \$100/mo (pretax reduction available) 925-943-6701, ext. 2-3005

SERVICES

TUTORING in high school and college chemistry and math. 925-443-2095

Construction consultation/inspection services. 209-832-3052

SHARED HOUSING

Livermore - Room for rent, private bath, use of amenities, freeway access, short trip to Lab. BART & Las Positas, N/S, no pets, \$700.00 & 1/2 utilities 925-606-9982

Pleasanton -- room for rent (2 bd, 2 bath apt). avail 3/1. \$650, \$500 dep. 12 min to lab. w/d, a/c, covered parking, storage closet, dsl, cable. x26585 or 925-924-0273

Livermore - - Master bedroom w/ own bath. Full house priv. 4 mi to lab. N/S, N/P. \$595/month + util. 925-200-9976

Livermore - furnished room for rent. Mature adult/long term preferred. Clean/quiet. \$550.00/month. Share utilities 1/3. Deposit required. 925-449-1128

Livermore - Room Wanted. Prefer female roomates and private bath, near to Lab. Would use Mon-Thurs., Long-term. 209-988-0372

Livermore - Share 2BD 2BA aptmt avail 2/22. Minutes to Lab, 580 and 84 frwy. \$500 mo/\$350 dep + 1/2 utilities. Call Arland 925-443-4357

TO TRADE

I want to trade clear custom tail lights for a 2002 Honda Civic for stock tail lights. 209-832-5944

Looking to trade electrical work for: 1) need cabinets built, 2) countertops installed, 3) plumbing done, for new addition. 209-836-3062

TRUCKS & TRAILERS

1962 - Ford F-100 Custom Cab, Unibody construction, long bed, 292 V-8, Automatic Transmission, brand new generator & regulator, runs good. \$2600/obo. 209-599-7678

2000 - 2000 25ft Coachman, prefect condition, Very clean. \$11,500. ph: 209-614-1694 or x32224 <http://www.geocities.com/traveltrailer2000/> 209-614-1694

1994 - Ford Ranger XLT, Black, 4L-V6, Std, AC, PS,PB, AM-FM CD Changer, 83K miles, Great Condition \$4500 obo 209-830-7225

VACATION RENTALS

Vacation at any RCI location (Hawaii, England, Canada, Arizona, etc.). - Goto www.RCI.com, resort directory, then call with a date and location of your choice. All inclusive places also available. 925-449-6048

R-Ranch at the Lake - Timeshare, 1800 acres, horses, swimming, cabins, camping, RV hookups, much more. Must sell. \$1500/BO 925-829-6203

Soda Springs/Donner Summit Classic A frame, 2BR/1BA+Loft, sleeps 8, Walk to Royal Gorge 5 min to Sugar Bowl \$250 wknd,\$550/week call for availability 209-836-3481

Maui, HI - Kahana Reef oceanfront 1BR/1BA condominium. Beautiful two-island view, oceanside pool, and BBQs. Low LLNL rates for year-round reservations. 925-449-0761

WANTED

WANTED: General Mills Box Tops for Education. Collecting for school library. Send to L Positeri at L-728. Collecting year round. THANK YOU! 209-576-7560

Queen size bed frame in good condition. Will pick up at your convenience. 209-612-8052

Looking into replacing my deck - would like contractor recommendations from anyone who has done this recently. 925-449-1481

WANTED: 15hp outboard motor in good running condition. 510-728-1185

Due to space limitations, *Newsline* may withhold ads that have already run. They will still appear on the Web.

NEWS OF NOTE



BUDGET

Continued from page 1

said Steve Zevanove, LLNL budget officer. “There are no surprises in the budget,” said Zevanove, noting the budget “appears flat,” but that the Lab tables in DOE’s request do not reflect funding for Work for Others, Department of Homeland Security, or contingency held at DOE Headquarters

“As expected, construction is a smaller piece of the budget pie as funding for planned construction projects wind down,” he said. “But operating funds are up.”

The drop in funds for construction from \$279 million in FY 2003 to \$193 million for FY 2004 accounts for the slightly lower “weapons activities” total figure in the FY 2004 budget request. However, the operating budget request shows increases for Directed Stockpile Work, Campaigns, Readiness in Technical Base and Facilities, the Facilities and Infrastructure Recapitalization Program and Safeguards and Security. The FY 2004 budget request includes full funding for the National Ignition Facility (NIF) construction project. NIF will play a key role in stockpile stewardship.

Other FY 2004 budget request highlights include:

- The proposed budget for the DOE/NSA Facilities and Infrastructure Recapitalization Program (FIRP) shows a 15 percent increase over the FY 2003 request. This program funds maintenance and infrastructure activities for a prioritized list of facilities with the goal of increasing their operational efficiency and effectiveness.

- Defense Nuclear Nonproliferation — \$82.3 million total, including \$46.3 million for nonproliferation programs with Russia, up from \$44.4 million in FY 2003.

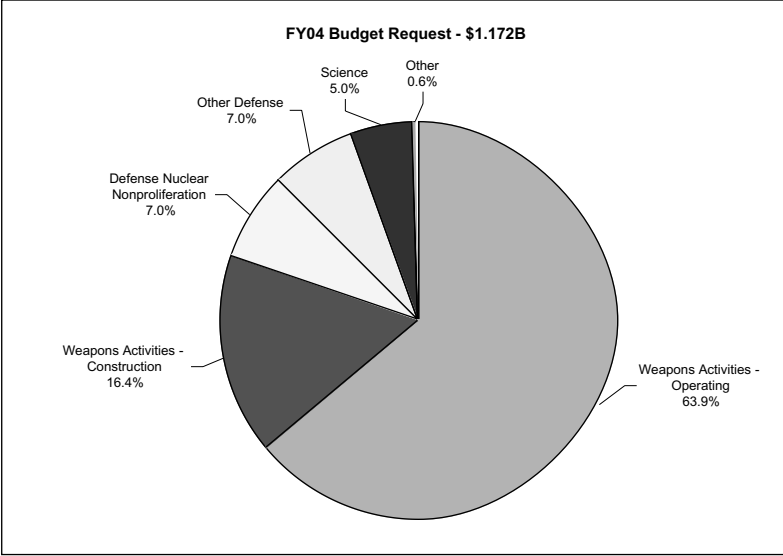
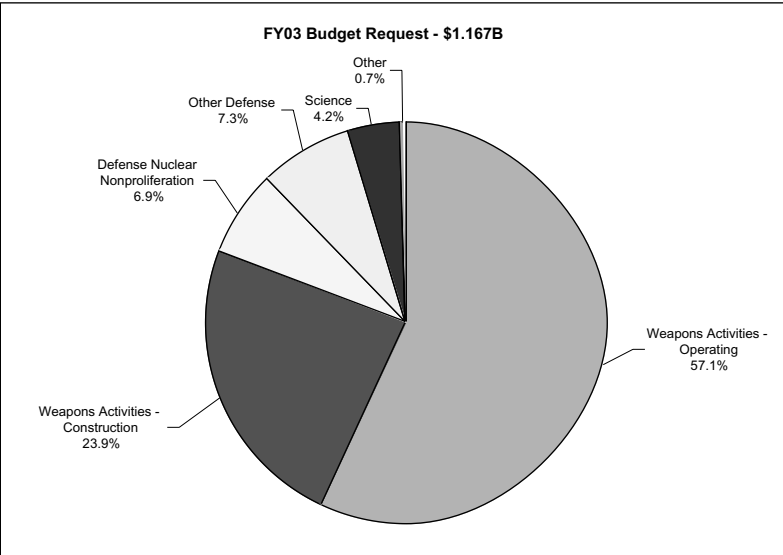
- Science — \$59 million total, including \$700,000 for nuclear physics; \$36.5 million for biological and environmental research and \$3.1 million for Advanced Scientific Computing.

- Energy Supply — \$3.5 million total, including \$2 million for hydrogen technology, up from \$1.7 million in FY 2003.

Zevanove notes that comparison with FY 2003 figures is difficult because Congress still has not passed the appropriations bills for the FY 2003 budget.

“The numbers for the FY 2004 budget request are still preliminary and high level and will change as the budget process plays itself out,” he said. “This FY 2004 budget request is a good starting point that reflects continued strong support for Lab national security missions.”

The pie charts compare FY 2003 and FY 2004 budget requests. Charts show expected decline in funding for construction projects which are nearing completion.



DOE unveils FY 04 budget request

WASHINGTON, D.C. – Energy Secretary Spencer Abraham released the Department of Energy’s (DOE) Fiscal Year 2004 budget request to Congress this week, calling it a “good reflection on the Energy Department, its programs and its people.”

Abraham said that the \$23.4 billion budget request demonstrates that the Administration and the Congress recognize the critical contribution the department makes to a peaceful and prosperous future by helping to secure the United States’ national security, its energy security and its position as the world leader in science and technology.

The department’s budget has increased nearly 25 percent when compared to the last budget presented by the previous administration in fiscal year ‘01.

“The president demands results and we have delivered,” Abraham said. “We have proven our worth by taking huge strides in carrying out our national security mission by maintaining our nuclear stockpile, rebuilding the capabilities of our defense complex, and preventing the spread of nuclear weapons and materials.”

Noting that the budget proposal reflects, and is intended to address, the critical challenges the Energy Department will face in the coming decades, Abraham said he has charted a course that emphasizes DOE’s critical contributions to the nation’s national security and provides far-reaching solutions to America’s energy problems.

These priorities are to maintain the nuclear stockpile; expand non-proliferation activities into a more comprehensive program; accelerate the environmental cleanup program; develop the 21st century’s cutting edge advanced fuel cell and alternative energy technologies program; maintain coal as a major, low-cost, domestically produced energy resource through President Bush’s Coal Research Initiative; build and maintain a stable and effective national defense program and continue the department’s leadership to ensure nuclear power remains a key energy resource; and, build a scientific research capability second to none.

Abraham also discussed the department’s efforts to devote resources to revise and accelerate cleanup plans for 18 DOE sites; pursue private sector partnerships to develop technologies and processes under the Clean Coal Initiative to take advantage of this domestic energy resource; develop a carbon sequestration research program; and overcome daunting challenges of fuel cell costs, hydrogen production and on-board hydrogen storage as part of the FreedomCAR and FreedomFuel initiatives.

Safeguarding and securing DOE’s nuclear facilities, materials and information, and protecting employees in a post 9/11 environment remains one of the Abraham’s top priorities. As such, the department’s safeguards and security funding in the FY 2004 request is \$1.2 billion, an increase of \$179 million over the FY 2003 request. Within the amount requested, \$586 million will support activities to safeguard DOE’s NNSA nuclear weapons facilities, \$357 million will support activities that protect the Cold War nuclear waste material being cleaned up at the department’s environmental cleanup sites, \$238 million will fund the security of the department complex-wide, and \$48.1 million will support continued safeguards and security activities at the department’s scientific laboratories and facilities. A portion of these expenses will be recovered through charges to non-DOE customers performing work at DOE laboratories.

Funding priorities for the FY 2004 budget highlights are as follows:

- National Nuclear Security Administration (\$8.8 billion for FY 2004)
- Energy (\$2.5 billion for FY 2004, an increase of \$9.0 million above FY 2003)
- Environment (\$8 billion for FY 2004, an increase of \$354 million over FY 2003 request)
- Office of Science (\$3.3 billion for FY 2004, an increase of \$64 million above FY 2003 request)

To read the complete roll out announcement and for more FY 2004 budget information see: <http://www.mbe.doe.gov/budget/04budget/>.

Abraham on labs weapons activities and nonproliferation

Editor’s note: Excerpted below are Secretary Spencer Abraham’s remarks with regard to Lab missions in Stockpile Stewardship and Nonproliferation.

“Our nuclear capability protected the nation and helped us to win a 50-year Cold War. Today it continues to be a key strategic component of our nation’s security posture. Our challenge today is large and complex: We must maintain the safety, security, reliability and effectiveness of our aging nuclear weapons stockpile without resorting to underground testing — and also provide a manufacturing base for the production of a replacement weapon if the need should arise.

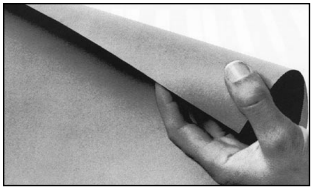
“Our budget proposes \$6.4 billion in spending for stockpile stewardship and rebuilding our Defense Complex, \$532 million more than the 2003 budget. We will use our increased funding to continue advancing the scientific and manufacturing capabilities we need over the long term.

“While we work to keep our stockpile ready, safe and secure, we must at the same time expand our already productive efforts to prevent the spread of nuclear weapons and materials.

“As a result of the unprecedented levels of cooperation reached by President Bush and President Putin to control the proliferation of nuclear materials, Russia and the United States have agreed to complete the work of protecting some 600 tons of Russian fissile material by 2008, a full two years earlier than expected. In addition, the United States, Russia, and the International Atomic Energy Agency this year will intensify international cooperation to keep radioactive materials — the kind that could be used in the construction of “dirty bombs” — out of the hands of terrorists.

“To carry out these complex tasks, we have increased our total nonproliferation budget to more than \$1.3 billion, a 30 percent increase over last year’s budget. Our nonproliferation budget will make it possible for us to increase our international monitoring visits to sensitive nuclear sites by one-third, and boost our contributions to international safeguards work carried out through the International Atomic Energy Agency and other cooperative programs by 17 percent over 2003 funding levels.

“We will also continue to move ahead with work related to plutonium disposition facilities in the United States and Russia to eliminate excess weapons plutonium, and accelerate our program for the elimination of Russian highly enriched uranium.”



THE BACK PAGE

Continued from page 1

The researchers recruited 97 men between the ages of 22 and 80 who were employed or retired from Lawrence Livermore National Laboratory. Samples were brought to the onsite research laboratory within two hours after collection to accurately measure sperm motility — its liveliness and direction of movement — and other indicators of semen quality. The researchers gathered extensive medical, lifestyle and occupational exposure history from the men, and excluded those who had smoked in the prior six months or had other relevant health problems.

“Simply put, sperm slow down with age,” said study co-author Andrew Wyrobek, head of the Health Effects Genetics Division at the Laboratory. “In addition, age impacts progressive motility, which is the ability of sperm to move forward with a clear goal in mind. Sperm that swim around in circles may get trapped in

Progressive motility, which measures whether the sperm is traveling in a linear direction, also started to decrease in men in their 20s by 3.1 percent per year. By age 30, the probability of progressive motility being clinically abnormal is about 50 percent, gradually increasing to 82 percent by age 80.

The decreased fertility associated with maternal age has been well established, but understanding the effects of paternal age has become increasingly important. Over the decades, more and more men are having children at older ages. Since 1980, there has been a 24 percent increase in men aged 35 to 54 fathering children. But research has also indicated that older men take longer to conceive than their younger counterparts. One study of 8,515 planned pregnancies found that men older than 35 have half the chance of fathering a child within 12 months compared with men younger than 25, even when the age of the mother is considered.

“Women tend to be the focus in fertility issues,”

The authors said that changes in semen quality with age may be due to various physiological factors, including age-related narrowing and sclerosis of the testicular tube, degeneration of germ cells, and normal changes in the prostate, or to increased probability of exposure to disease or environmental agents.

The authors note that semen quality is considered a proxy for fertility, indicating that men who wait until they are older to have children are risking difficulties conceiving.

Other co-authors of the study are Sharon Kidd, Lee Moore and Suzanne Young from UC Berkeley's School of Public Health; and Eddie Slotter and Dan Moore from the Biology and Biotechnology Research Program at Lawrence Livermore National Laboratory.

The study was funded by a grant from the National Institute of Environmental Health Sciences, part of the National Institutes of Health.

Continued from page 1

The scientific horsepower of this Lab has led the world in technical breakthroughs — in nuclear weapons technology that won the Cold War as well as in computers and computing science, precision machining and nanotechnology, designer materials and astrophysics, high-power lasers and genomics.

Each and every one of us contributes to the accomplishment of the Lab's goals. Each of us shares some sense of this passion for mission.

In the 1950s, at the height of the Cold War, Lab scientists developed the W47 warhead for the Polaris submarine-launched missile, meeting size and timeline constraints that others said couldn't be met and providing the nation with the crucial third leg of the strategic triad.

The 1990s saw the end of nuclear testing and the breakup of the Soviet Union, two events that profoundly affected the Lab. Passion for mission (together with many long hours of work) has led to breakthrough accomplishments in stockpile stewardship, including fully three-dimensional computational simulations of nuclear weapon operation and, most recently, the achievement of first light with the National Ignition Facility.

Commitment to meeting the evolving

Passion for Mission

Simultaneous excellence in science & technology, operations, and business practices

Balancing innovation with disciplined execution

Teamwork while preserving individual initiative

Intense competition of ideas with respect for individuals

Treating each other with dignity

A high-quality, motivated workforce with diverse ideas, skills, and backgrounds

Rewarding and recognizing performance

Commitment to the collective success of the Laboratory

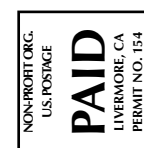
Passion for mission was clearly evident on September 11, 2001. Walking through the halls of my building that day, I saw employee after employee still in their offices, even though they'd been told they could leave. One after another said they felt compelled to stay at work, just in case something came up where they could help.

Time and time again, Livermore employees put the needs of the nation ahead of their personal lives. Many of us start our employment at the Lab with a passion for scientific and technical discoveries. As we understand the challenges

We do this because we know we are helping solve national problems. We know our work matters.

This ability to see the big picture and identify what's important, to set priorities and then achieve our goals — these are the things that keep our passion for mission alive. We must always seek new ways to articulate this passion, to accomplish our mission and to make a difference.

Passion for mission is more than a value — it's our way of life.



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